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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,843	05/31/2005	David Graham Taylor	045637-005	4671
25461	7590	04/07/2008	EXAMINER	
SMITH, GAMBRELL & RUSSELL SUITE 3100, PROMENADE II 1230 PEACHTREE STREET, N.E. ATLANTA, GA 30309-3592			JACKSON, MONIQUE R	
		ART UNIT	PAPER NUMBER	
		1794		
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		04/07/2008	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/506,843	TAYLOR, DAVID GRAHAM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Monique R. Jackson	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-41 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-41 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>9/04</u> .	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 28 recite a barrier layer comprising a reactive hot melt polyurethane adhesive, however, it is unclear whether the Applicant's intent is to claim the intermediate or the final cured product given that in the final product, the polyurethane adhesive would not be a reactive or a hot melt.

3. Claims 2-5 and 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-5 and 31-34 recite a limitation with respect to permeability but fail to recite what type of permeability is being claimed.

4. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 recites the limitation "shaped to resemble a champagne cork" however given that a champagne cork can vary in shape, it is unclear what is meant to be encompassed by the limitation.

5. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. Claim 39 recites the limitation "the stopper" in line 3. There is insufficient antecedent basis for this limitation in the claim

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 9, 10, 12-17, 19, 24-27, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/64647 (WO'647). WO'647 teaches a method for producing a coating or diffusion layer on a substrate such as a cork for use in contact with food or beverage, wherein said coating or diffusion layer prevents or inhibits passage therethrough, such as from a cork to an alcoholic beverage like wine, and limits oxygen permeability (Abstract; Page 1-2.) WO'647 teaches that the method comprises applying an effective amount of a barrier polymer to the surface of the substrate, wherein the barrier polymer may be in the form of a polymer film and may be those selected from the listing of polymers on pages 4-5, including polyurethane, polyethylene vinyl alcohol (EVOH), laminate films comprising polyolefins, polyethylene terephthalate (PET), EVOH, and/or polyamides (Pages 3-5.) WO'647 also teaches that the polymers can be applied to the cork by conventional methods including reactive adhesion and melt polymer application, and the polymers may further comprise lubricants (reads upon "additives") to allow the coated cork to be easily inserted and removed from the bottle (Page 6.) WO'647 teach examples utilizing a laminate comprising polyethylene/metallized PET/polyethylene, as well as a laminate comprising polyethylene/polyethylene vinyl

alcohol/polyethylene (Examples 8-9). WO'647 also provides an example utilizing a polyurethane formed from a polyurethane coating applied to the cork by dipping the cork into the coating and cured at 40°C (Example 4), wherein the Examiner takes the position that this example reads upon the claimed stopper as a final cured product and would meet the claimed limitations with respect to permeability. With terms of the claimed shape limitations, the Examiner takes the position that one would clearly envisage a cylindrical shape as well as a rounded or beveled face as claimed given the teachings of WO'647 with respect to a wine bottle cork. With respect to Claim 19, the Examiner takes the position that the coating on the sides of the cork read upon the claimed limitation.

8. Claims 1-10, 12-22, 24-29, 31-37, and 39-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanaya et al (USPN 4,745,014.) Hanaya et al teach a packaging material and sealing cap formed from the packaging material comprising a metallic foil and at least one synthetic resin film adhered to the metallic foil via an adhesive, wherein Hanaya et al teach that a preferred adhesive is a urethane resin of the two-pack curable type comprising an organic polyisocyanate and a polyol component (reads upon "reactive hot melt polyurethane"; Abstract; Col. 2, lines 39-65; Col. 4, lines 38-56.) Hanaya et al teach that the metallic foil can be aluminum or aluminum alloy having a thickness of about 5 to about 30 microns (*inherently has an oxygen permeability as claimed*); and the synthetic resin film can be polypropylene, polyethylene, polyvinyl chloride, polystyrene, polyester, etc., having a thickness of about 20 to about 100 microns, and can be applied to both surfaces of the metal foil (Col. 3, lines 9-14 and 59-68; Col. 4, lines 3-10.) Hanaya et al also teach that the metal foil can be provided with a colored layer comprising pigments or dyes in a binder (Col. 4, lines 23-38.) Hanaya et al further

teach that the packaging material can be used as a cap for cap for sealing bottles of wine or champagne, and can be provided over the mouth of a wine bottle closed with a cork cap and heat shrunk over the mouth to seal the capped mouth (Abstract; Col. 6, lines 25-47.) Hence, the packaging film taught by Hanaya et al as well as the cap formed from the film and the capped bottle with a cork (Figures), all read upon the broadly claimed "stopper" including the shapes and permeability ranges as claimed, given that even the unshaped film taught by Hanaya et al is capable of being a "stopper".

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6-8, 11, 18, 20-23, 28-38 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'647. The teachings of WO'647 are discussed above. Though WO'647 teach that the barrier polymer can be applied by reactive adhesion or hot melt polymer, WO'647 does not specifically teach a reactive hot melt polyurethane as claimed. However, considering WO'647 teach the use of polyurethane as a coating barrier polymer and given that polyurethane is an obvious species of adhesive utilized in the art as both a reactive and hot melt, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a reactive hot melt polyurethane as the adhesive to bond any of the barrier films taught by WO'647 to the cork. Though WO'647 teach that the polymer coating provides a barrier and limits oxygen permeability, WO'647 does not specifically teach the coating thickness as claimed. However,

one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum barrier layer thickness to provide the desired barrier properties based on the barrier material selected. In terms of Claim 11, though WO'647 teach that the barrier polymer may further comprise lubricants, WO'647 does not teach the claimed additives however powdered PTFE is an obvious species of lubricant utilized in the art and metal oxides are an obvious species of conventional additive utilized to provide color as well as other desired properties. Lastly, though WO'647 teach examples wherein the coating is applied to the entire cork, one skilled in the art at the time of the invention would have been motivated to determine the desired coverage of the barrier coating to provide on the cork based upon the desired barrier properties for a particular end use.

11. Claims 11, 17, 23, 30 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanaya et al. The teachings of Hanaya et al are discussed above. Though Hanaya et al teach that the packaging film can comprise a colored layer including pigments (reads upon "additives"), Hanaya et al do not specifically teach that the pigments are metal oxides, however, metal oxides are an obvious species of pigment utilized in the art and would have been obvious to one skilled in the art at the time of the invention. With respect to the claims incorporating an ethylene vinyl alcohol layer, it is noted that Hanaya et al teach the use of various thermoplastic resin including polyolefins, ethylene vinyl acetate, carboxylated ethylene vinyl acetate, and vinyl chloride-vinyl acetate copolymers. Though Hanaya et al do not specifically teach EVOH, one having ordinary skill in the art at the time of the invention would have been motivated to utilize EVOH given its known barrier properties and functional equivalence to layers taught by Hanaya

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et al, including as a substitute material for a metal foil, and hence would have been obvious to one skilled in the art in producing the packaging film taught by Hanaya et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/  
Primary Examiner, Art Unit 1794  
March 29, 2008